

July 2015

Shawnee County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 24 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Shawnee County economy.¹ These 24 sectors have a total direct output of approximately \$1571 million and support 3,821.6 jobs in Shawnee County. Running the model for all 24 sectors simultaneously produces the following results:

Agriculture Contribution in Shawnee County

Impact Type ²	Employment	% of Total Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	3,821.6	3%	\$345,718,641	4%	\$1,571,437,889	18%
Indirect Effect	2,506.7	2%	\$244,827,495	3%	\$421,872,187	5%
Induced Effect	1,721.6	1%	\$123,428,820	1%	\$210,965,383	2%
Total Effect	8,049.9	7%	\$713,974,957	8%	\$2,204,275,459	25%

As shown in the above table, agriculture, food, and food processing supports 8,049.9 jobs, or 7% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$2204 million, roughly 25% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 24 agriculture, food, and food processing sectors is approximately \$714 million, or 8% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 8% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

⁴ GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

⁵ Output = Intermediate Inputs + Value Added

In the top ten by employment, All other food manufacturing is the top employer in the agriculture industry with 1,094.3 employees. This table also shows the amount of jobs that are created by the agriculture industry in Shawnee County.

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
All other food manufacturing	1,094.3	\$369,316,217
Other snack food manufacturing	668.5	\$464,417,225
Wholesale trade.....	601.5	\$146,651,796
Dog and cat food manufacturing	397.4	\$515,005,413
Landscape and horticultural services	333.2	\$24,607,933
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming.....	271.3	\$20,829,976
Veterinary services	271.0	\$20,269,249
Grain farming	223.4	\$23,181,230
Management of companies and enterprises.....	217.8	\$51,363,049
Employment services.....	192.9	\$7,729,153

The Dog and cat food manufacturing industry directly contributes approximately \$515 million to Shawnee County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Dog and cat food manufacturing	397.4	\$515,005,413
Other snack food manufacturing	668.5	\$464,417,225
All other food manufacturing	1,094.3	\$369,316,217
Wholesale trade.....	601.5	\$146,651,796
Management of companies and enterprises.....	217.8	\$51,363,049
Other animal food manufacturing.....	25.8	\$40,711,159
Owner-occupied dwellings	0.0	\$29,525,608
Truck transportation.....	190.4	\$25,670,916
Landscape and horticultural services	333.2	\$24,607,933
Grain farming	223.4	\$23,181,230

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Shawnee County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.